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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/711,724	09/30/2004	Gaurav CHANDRA	TI-38003	5723

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EXAMINER	
HANNON, CHRISTIAN A	
ART UNIT	**PAPER NUMBER**
2618	

NOTIFICATION DATE	DELIVERY MODE
05/30/2007	ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

uspto@ti.com
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Office Action Summary	Application No.	Applicant(s)	
	10/711,724	CHANDRA ET AL.	
	Examiner	Art Unit	
	Christian A. Hannon	2618	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *30 September 2004*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-15* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1 and 8* is/are rejected.

7)☒ Claim(s) *2-7& 9-15* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

2. Claims 1 & 8 are rejected under 35 U.S.C. 102(e) as being clearly anticipated by Greitschus et al (US 6,201,438), hereinafter Greitschus.

Regarding claim 1, Greitschus teaches a trans impedance filter circuit processing an input signal and generating an output signal, said trans impedance filter circuit comprising an operational amplifier having an inverting input terminal, a non inverting input terminal and an output path (Figure 2, Operational Amplifier), a first resistor having one terminal coupled to receive said input signal, and another terminal being coupled to said inverting input terminal (Figure 2, Item R3), a first capacitor being coupled between said one terminal of said first resistor and a first constant bias (Figure 2, Item C2), a second resistor connected between a first node and said output path, wherein said first node is in a path said input signal is provided to said inverting input terminal (Figure 2, Item R2), and a second capacitor connected between said inverting input terminal and said output path (Figure 2, Item C1).

Regarding claim 8, Greitschus teaches a device comprising a trans impedance filter circuit processing an input signal and generating an output signal, said trans impedance filter circuit comprising an operational amplifier having an inverting input terminal, a non inverting input terminal and an output path (Figure 2, Operational Amplifier), a first resistor having one terminal coupled to receive said input signal, and another terminal being coupled to said inverting input terminal (Figure 2, Item R3), a first capacitor being coupled between said one terminal of said first resistor and a first constant bias (Figure 2, Item C2), a second resistor connected between a first node and said output path, wherein said first node is in a path said input signal is provided to said inverting input terminal (Figure 2, Item R2), a second capacitor connected between said inverting input terminal and said output path (Figure 2, Item C1) and an analog to digital converter coupled to said output path and sampling said output signal to generate a plurality of digital samples (Figure 10, Items 10 & 11).

Allowable Subject Matter

3. Claims 2-7 & 9-15 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Regarding claim 2, Greitschus teaches the tarns impedance filter of claim 1 along with a third resistor connected in series with said first resistor at a second node, wherein said another terminal of said third resistor is connected to receive said input signal at said first node (Figure 2, Item R1), however Greitschus fails to teach a third capacitor

and a fourth capacitor connected in series between said first node and said inverting input terminal, said third capacitor being connected to said fourth capacitor at a third node and a fourth resistor being connected between said third node and a third constant bias.

Claims 3-7 are objected to as they depend from objected claim 2.

Regarding claim 9, Greitschus teaches the tarns impedance filter of claim 1 along with a third resistor connected in series with said first resistor at a second node, wherein said another terminal of said third resistor is connected to receive said input signal at said first node (Figure 2, Item R1), however Greitschus fails to teach a third capacitor and a fourth capacitor connected in series between said first node and said inverting input terminal, said third capacitor being connected to said fourth capacitor at a third node and a fourth resistor being connected between said third node and a third constant bias.

Claims 10-15 are objected to as they depend from objected claim 9.

Conclusion

4. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Greitschus et al (US 2005/0030092) disclose an active filter circuit with operational amplifier.

Easwaran et al (US 6,816,004) disclose minimizing noise in data channels implemented using frequency division multiplexing.

Nicollini et al (US 6,201,438) disclose an area-efficient reconstruction filters, particularly for D/A current-driven converters.

Nicollini et al (US 6,529,068) disclose an area-efficient reconstruction filters, particularly for D/A current-driven converters.

5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Christian A. Hannon whose telephone number is (571) 272-7385. The examiner can normally be reached on Mon. - Fri. 8:00 AM - 4:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ed Urban can be reached on (571) 272-7899. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

C. A. Hannon
May 16, 2007

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